

DENTAL REPORT

UNDERSTANDING THE POWERFUL

Dental & Mental Health Connection

SUMMARY OF CONTENTS

Benevis addresses the bidirectional relationship between poor oral health conditions and mental health disorders, and vice versa.

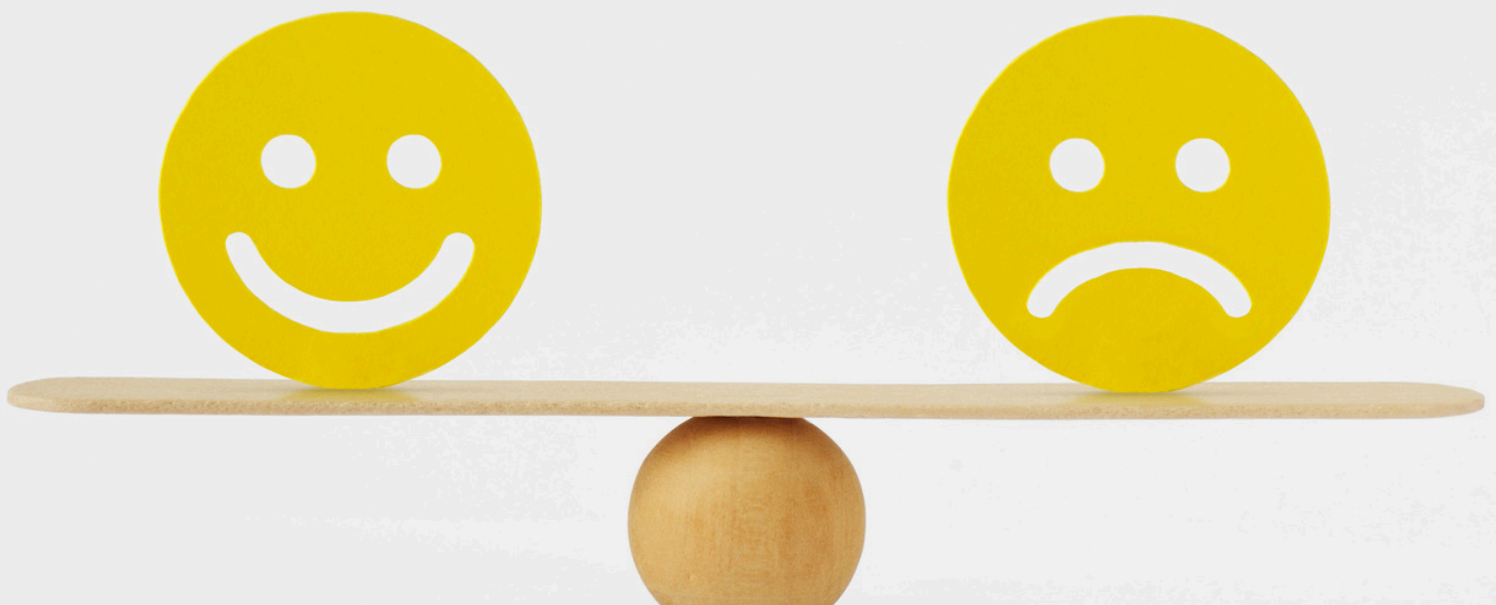


Table of Contents



- 03** Introduction
- 04** Bidirectional Relationship of Mouth & Mind
- 06** Trends and Demographics of Depression
- 08** From the Dentist Chair: Turning Frowns Upside Down
- 09** Role of Inflammation on Mental Health
- 10** Sad Statistics
- 11** Conclusion
- 12** References

Introduction

Oral and Mental Health: Exploring the Connection

In this report, Benevis explores the critical connection between oral health and mental health, beginning with the commonalities and concerns of both. Tooth decay, serious gum disease, and severe tooth loss are the hardest-hitting oral conditions with the most significant effects on the quality of a person's life, from their ability to work and socialize to their overall health and well-being (1). Similar to the impact of dental disease on the state of mental health, having depression can affect a person's state of well-being as well as the health of their mouth (2).

Another strong and consistent association among people with a higher prevalence of dental (3) and mental (4) disease is that they are disproportionately disadvantaged in their socioeconomic status, including income and education levels.

Access to oral health and mental health services is also a greater obstacle for underserved populations, given the limited number of dental (3) and behavioral health (5) professionals, facilities, and services available to meet their care needs. As a key dental provider to over 100 disadvantaged and marginalized communities across the country, Benevis believes it is dental professional's responsibility to make oral care accessible for everyone—including individuals who struggle with depression.

Most importantly, prior to reviewing this complete report, be mindful that a majority of depression (3) and dental conditions (6) are largely treatable and many oral health problems can be avoided through routine hygiene and preventive care.



FACTS

- 1 Depressed adults tend to have poorer oral health (7).**
- 2 Tooth decay, serious gum disease, and severe tooth loss significantly affect the quality of a person's life, health, and well-being (1).**
- 3 Depression and oral health conditions are largely treatable (3,6).**

Bidirectional Relationship of Mouth & Mind

There is a bidirectional relationship between the health of our mouth and the health of our mind—where poor oral health can adversely affect mental health, and poor mental health can wreak havoc on oral health (8). The fact that people struggling with mental health conditions have worse oral health and are more likely to lose their teeth than those without them emphasizes the disparity that exists for too many (7). Despite these known connections, oral health is often overlooked in mental health treatment and care. Understanding the stigma of poor dental health and how it can contribute to anxiety, depression, and self-esteem issues (1) supports the need to improve it for better overall mental well-being.



“Losing teeth can be psychologically traumatic, socially damaging, and functionally limiting,” reports the World Health Organization (1).

Chronic oral infections that cause systemic inflammation have also been associated with mental health conditions like depression and Alzheimer’s disease (9). This bidirectional relationship emphasizes the importance of integrated care that takes both oral health and mental health into consideration when treating people with chronic conditions.

Bidirectional Relationship of Mouth & Mind

Poor mental health can lead to the neglect of oral health and general self-care habits, continuing the cycle of one poor health behavior affecting the other and vice versa (10). Here are several ways one area can harm the other:

Inflammation: Chronic oral infections can lead to continued inflammation that infects the body's systemic health and contributes to mental health conditions, including depression and cognitive decline (11).

Hygiene: It may be more difficult for people struggling with depression or anxiety to take care of their daily oral hygiene. When energy levels are low and negative thoughts persist, depression often suppresses a person's motivation to care for their oral health. Such neglect can elevate the risk of gum disease and tooth decay, causing more inflammation. Thus, the unhealthy cycle continues (12).

Pain: An infected tooth, gum disease, temporomandibular disorders, and other dental issues can lead to chronic pain, elevating levels of stress and anxiety and further upsetting a person's mental well-being (12,13).

Sleeplessness: Individuals who grind their teeth (bruxism) or have dental conditions that cause tooth pain often have difficulty sleeping (11). While anxiety can lead to bruxism, not having enough quality sleep can result in anxiety, depression, and the inability to manage stress (13).

Social Isolation: People may socially isolate themselves because they are embarrassed by poor oral health conditions like missing teeth, gum recession, or bad breath, which can lead to feelings of low self-esteem, anxiety, and depression (11).

Smiling: Although smiling can improve mood and mental health, many people suffering from poor oral health choose to hide theirs. Hiding a smile can affect a person's emotional well-being and how others see them (14).

Side Effects from Drugs: Antidepressant and antipsychotic medications that treat mental health conditions can dry out the mouth and elevate the risk of tooth decay and gum disease (15). While meant to help, these medications can actually hurt oral health and make mental health challenges worse. Periodontal disease and tooth decay are also linked to the use of alcohol, amphetamine, marijuana, opioids, and other drugs (16).



Trends & Demographics of Depression

There is an unhealthy connection between chronic oral infections and depression, which will be discussed later in this report. But because depression is a known predictor of oral disease (17), it is important to first understand its widespread impact, trends, and key demographics, and how they often overlap with the oral health space.

Depression is defined as “a common and serious mental disorder that negatively affects how you feel, think, act, and perceive the world,” according to the American Psychiatric Association (18). Approximately 21.9 million (8.5%) U.S. adults and another 4.5 million (18.1%) adolescents had at least one major depressive episode in 2023, with a higher prevalence among females, those with two or more races, and lower-income and education status (19).

In the U.S., rates of depression have hit new heights. According to Gallup National Health and Well-Being Index, the proportion of adults reporting a depression diagnosis at any point in life has increased nearly 10 percentage points to 29% between 2015 and 2023. Additionally, the percentage of Americans currently experiencing depression or receiving treatment for it has also grown by approximately seven points during the same period, reaching 17.8% (20).



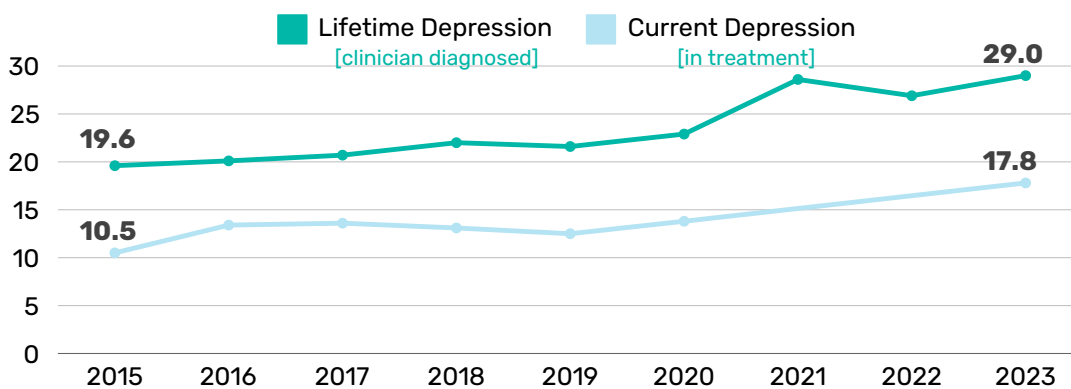
↑ 10%

In the U.S., depression rates have reached new highs, showing a 10% rise in diagnosis from 2015 to 2023.

cites the Gallup National Health and Well-Being Index, (20).

Trends & Demographics of Depression

The rate of depression among women, young adults, and Black and Hispanic adults is rising more rapidly. Compared to 20.4% of men, 36.7% of women report receiving a depression diagnosis at some point in their life at a rate nearly double that of men since 2017. A generational shift is taking place in the disease’s demographics where younger adults 18 to 29 (34.3%) and 30 to 44 (34.9%) are diagnosed with depression during their lifetime in greater numbers than older adults 44 and up. Young adults and women are also experiencing the highest rates of current depression or treatment for it. Among Black and Hispanic adults, disparities in depression are deepening as well. Where White adults have historically reported higher rates of past and present depression, Black and Hispanic adult depression rates have exceeded them (20). A separate study reported that low-income populations across all races and ethnicities experienced a higher probability of depression (21).



*Reproduced from Gallup data (20)

U.S. data from a 2023 National Survey on Drug Use and Health (NSDUH) on the prevalence of a major depressive episode are consistent with Gallup’s demographic findings. **Females, young adults, and adults and adolescents with two or more races all had a higher incidence of depression (22).**

The demographics of people with higher rates of depression are similar to those with greater severity of dental disease in the United States, where low-income groups (21) and minority races and ethnicities experience more significant disparities (16).



“The World Health Organization (WHO) defines oral health as the state of the mouth, teeth and orofacial structures that enables individuals to perform essential functions, such as eating, breathing and speaking, and encompasses psychosocial dimensions, such as self-confidence, well-being and the ability to socialize and work without pain, discomfort and embarrassment (1).”

From the Dentist Chair: Turning Frowns Upside Down

“As a dentist, I care for people of all ages. Because my practice welcomes patients who are uninsured or carry Medicaid or CHIP plans, I tend to see more disadvantaged children and adults. When dental hygiene isn’t a priority, I know there’s usually a reason. It may be because they’re struggling in some area of their life, whether it’s school, work, or something else. My patients can come to my office feeling embarrassed, anxious, and sometimes even depressed. When selfcare stops, brushing and flossing suffer, and decay can take hold. For my patients with tooth pain, they’re not sleeping well and often have a hard time eating because chewing food hurts. All of these challenges make working, learning, and just living life a lot harder. I see these scenarios in some of my underserved patients every week, which is why I want to make a difference in improving their oral health. No one should have to feel sad when it comes to the health of their mouth and teeth, especially since tooth decay is preventable and treatable. It’s my job to help all of my patients smile a healthy smile and leave my office feeling better than when they showed up.”

Dr. Carl Boykin, DDS, District Dental Director at Benevis

“Your state of mind can affect how you feel in every way. It’s my job to make sure my patients leave my office not only in better oral health, but with a big smile,” says Dr. Boykin.



Role of Inflammation on Mental Health

Chronic oral infections, inflammation, and systemic health are all connected, with inflammation playing a key role (23). This association suggests that addressing oral health could have a broader impact on mental health outcomes.

Inflammation is the body's natural defense against infection. When bacteria attack gum tissue and bone around the teeth, as in the case of periodontal disease, the oral infection sets an immune alert in motion that leads to inflammation. This chronic oral inflammation is triggered by conditions like gingivitis (early-stage gum disease) and periodontitis (late-stage gum and bone infection). Inflammatory molecules that begin in the mouth can move to organs and tissues throughout the body (23).

The inflammation process can affect a person's health in many ways, resulting in mental health disorders like depression (24) and cognitive decline (25).

Pathway to Depression

The pathway to depression begins when inflamed cytokines interfere with serotonin and dopamine, which help regulate mood. As chronic inflammation persists, it impacts the brain's ability to function and the brain stops sending signals for pleasure, reward, and motivation, or sends them less frequently (24). Without the ability to feel pleasure, the symptoms of depression take hold.

Cognitive Decline and Dementia

Neurodegenerative diseases like Alzheimer's and Parkinson's are also the result of chronic inflammation in the brain that damages neurons and brain cells and advances the aging process. Studies have shown that people with periodontal disease have a greater risk of developing these diseases and other types of dementia. In the case of periodontal disease, bacteria travel from the bloodstream to the brain, causing inflammation that harms cognitive functions (25).

Anti-inflammatory treatments or therapies managing systemic inflammation can help to reduce symptoms, benefitting both oral health and mental health outcomes. Additionally, provider screenings that address potential mental health conditions in patients with significant oral infections, or the other way around, could also be beneficial in earlier treatment and care (23).



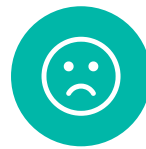
Sad Statistics

There is a relationship between depression, oral health outcomes, and oral health-related quality of life (26). Not only do adults with depression have 25% more tooth decay than the general population, but they have other significant oral health challenges too (27).



↑ Gum disease

Over half of adults with moderate depression had periodontal disease (7)



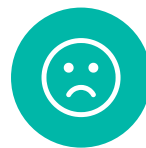
↑ Tooth decay

More than 1/3 of adults with moderate depression had untreated dental decay (7)



↑ Toothaches

Two-thirds of depressed adults said they had a toothache in the last 12 months (13)



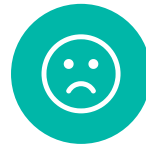
↓ Productivity

Lost productivity at work for major depression and oral issues is estimated at \$300 bil. and \$45.9 bil. respectively (28,16)



↑ 1.5X Women

Women are 1.5 times more likely to experience a major depressive episode than men (28)



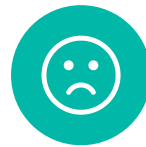
↑ 2.7X Tooth loss

The severely mentally ill are 2.7 times more likely to lose all their teeth (8)



↑ Missing teeth

As severity of depressive symptoms grow in adults over 65, the number of missing teeth increase too (27)



↓ Toothbrushing

Colgate survey found 10 mil. Americans with depression have not brushed their teeth in over two weeks (29)

“

Oral health plays a major role in well-being and self-esteem, while oral diseases heavily affect quality of life, productivity, and ability to work as well as social participation. –World Health Organization (1)

Conclusion

Unpacking the Powerful Links Between Dental Health and Mental Well-Being

There is a powerful relationship between the mouth and mind, where improving the health of one area can improve the health of the other (23). Symptoms of depression have been connected with mild periodontitis, tooth decay, and missing larger numbers of teeth (1). Chronic oral infections, such as gum disease, contribute to systemic inflammation, which has been linked to mental health conditions like depression and cognitive decline (25). This bidirectional relationship highlights the importance of integrated care that considers both oral health and mental health in treating individuals with chronic conditions (23).

Addressing oral health is often an overlooked aspect of mental healthcare. It's important to consider both in care plans, as improving oral health can lead to improvements in mental well-being, and vice versa. Working together, dental and mental health providers can coordinate care and develop tailored treatment plans for patients that improve wellness. They can also make patients aware of the links between their depressive symptoms and oral health status for better dental and mental health provider support and overall care (23). With considerable research on the links between poverty and poor oral health and mental disorders, policy action should also be prioritized to provide supportive economic interventions.

“Left untreated, oral diseases can be devastatingly painful and make everyday tasks difficult. They can harm a person’s physical, mental, and social health,” says Dr. Carl Boykin, DDS, District Dental Director at Benevis.



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Benevis is a leading dental healthcare organization for practices focused on delivering critical oral care and orthodontics to underserved communities. Through comprehensive care and operational services that expand access to dentistry, Benevis has a 20-year history of providing the highest quality care to approximately 5 million children and adults. Its network reaches more than 100 dental offices across the U.S. that deliver treatment during 1.4 million visits each year. Benevis also advocates for programs and legislation that ensure all families have access to the oral healthcare they need and deserve.

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